

PUBLIC HEALTH ACT

(11 & 12 Vict. Cap. 63.)

REPORT

TO THE

GENERAL BOARD OF HEALTH

ON A

PRELIMINARY INQUIRY

INTO THE SEWERAGE, DRAINAGE, AND SUPPLY OF  
WATER, AND THE SANITARY CONDITION  
OF THE INHABITANTS

OF THE PARISH OF

EASTWOOD,

AND THE HAMLETS OF

NEWTHORPE, MOORGREEN, AND BRINSLEY,

IN THE PARISH OF GREASLEY, ALL IN THE COUNTY  
OF NOTTINGHAM.

By WILLIAM LEE, Esq., C.E.,

SUPERINTENDING INSPECTOR.



LONDON :

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FOR HER MAJESTY'S STATIONERY OFFICE.

## NOTIFICATION.

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THE General Board of Health hereby give notice, in terms of section 9 of the Public Health Act, that on or before the 1st day of November next, being a period of not less than one month from the date of the publication and deposit hereof, written statements may be forwarded to the Board with respect to any matter contained in or omitted from the accompanying Report on a Preliminary Inquiry into the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the Parish of EASTWOOD, and the Hamlets of NEWTHORPE, MOORGREEN, and BRINSLEY, in the Parish of Greasley, all in the County of Nottingham, or with respect to any amendment to be proposed therein.

By order of the Board,

C. MACAULAY, *Secretary.*


*Whitehall, 31st August 1853.*

EASTWOOD.



Parts of Hamlets not included in the District, thus;

Scale. Two Inches to One Mile.

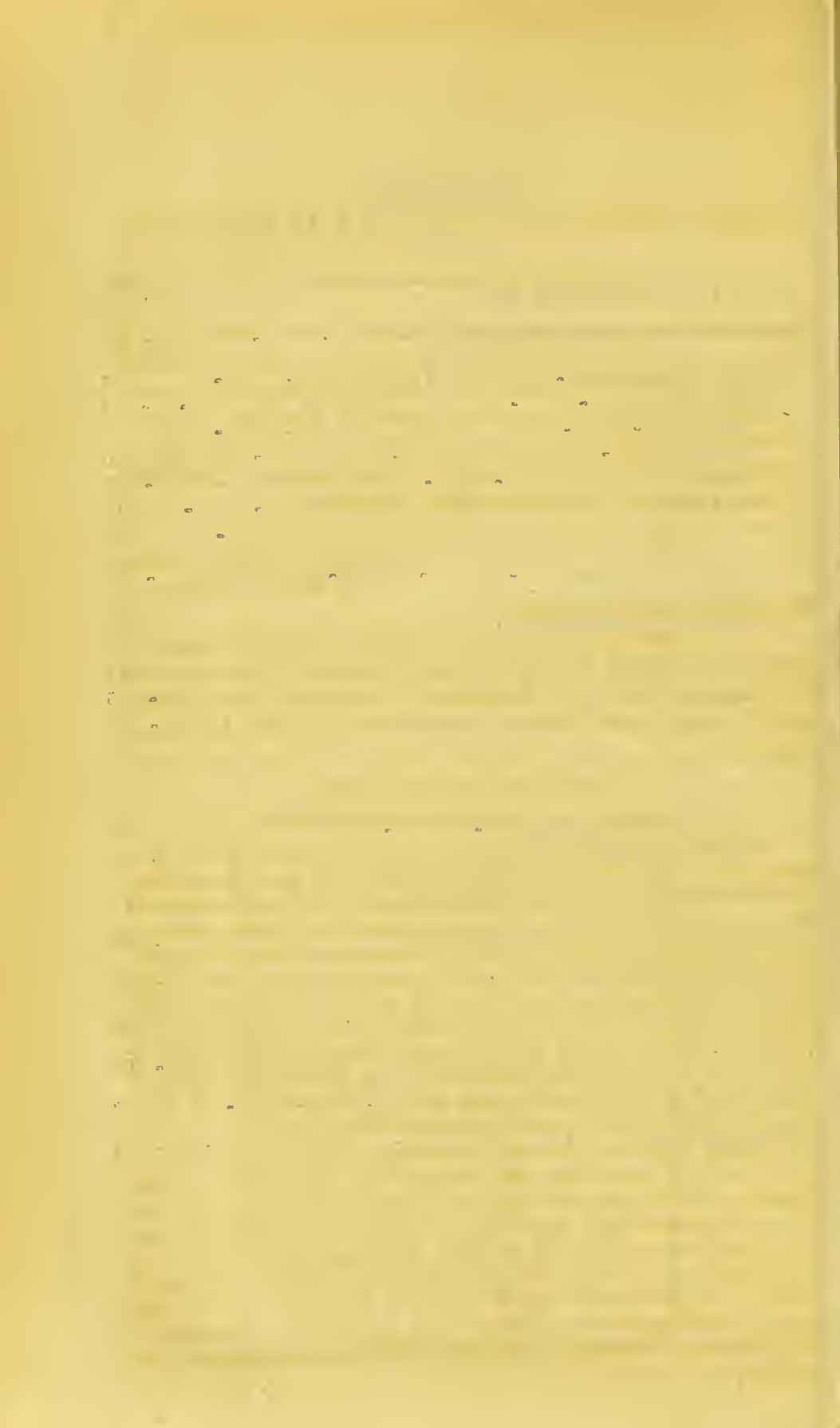


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## PUBLIC HEALTH ACT (11 & 12 Vict. c. 63.)

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*Report to the General Board of Health on a Preliminary Inquiry into the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the Parish of EASTWOOD, and the Hamlets of NEWTHORPE, MOORGREEN, and BRINSLEY, in the Parish of GREASLEY, all in the County of Nottingham. By WILLIAM LEE, Esq., Superintending Inspector.*

7, Duke-street, Westminster,  
14th March 1853.

MY LORDS AND GENTLEMEN,

IN obedience to your directions (founded upon a petition, of which the following is a copy), I have made a Preliminary Inquiry in Eastwood, Newthorpe, Moorgreen, and Brinsley, and beg to lay before you the following Report.

PUBLIC HEALTH ACT, 1848.

PETITION FOR APPLICATION OF THE ACT.

“Whereas, by the Public Health Act, 1848, it is enacted, that from time to time after the passing of that Act, upon the petition of not less than one tenth of the inhabitants rated to the relief of the poor of any city, town, borough, parish, or place having a known or defined boundary, not being less than 30 in the whole, the General Board of Health may, if and when they shall think fit, direct a Superintending Inspector to visit such city, town, borough, parish, or place, and to make public inquiry, and to examine witnesses as to the sewerage, drainage, and supply of water; the state of the burial-grounds; the number and sanitary condition of the inhabitants; and as to any Local Acts of Parliament in force within such city, town, borough, parish, or place, for paving, lighting, cleansing, watching, regulating, supplying with water, or improving the same, or having relation to the purposes of this Act; also as to the natural drainage areas, and the existing municipal, parochial, or other local boundaries, and the boundaries which may be most advantageously adopted for the purposes of this Act, and as to any other matters in respect whereof the said Board may desire to be informed, for the purpose of enabling them to judge of the propriety of reporting to Her Majesty, or making a provisional order, as mentioned in the said Act.

“Now, therefore, we, the undersigned inhabitants of the parish of Eastwood, and the adjoining hamlets of Newthorpe, Moorgreen, and Brinsley, in parish of Greasley, in the county of Nottingham (the same being places having a known or defined boundary within the meaning of the said Act), and one tenth in number of the inhabitants rated to the relief of the poor of and within the said parish and adjoining hamlets, do hereby petition the General Board of Health to direct a Superintending Inspector to visit the said parish and adjoining hamlets, and to make inquiry and examination with respect thereto, with a view to the application of the said Act, according to the provisions of the said Act in that behalf.

(Signed) “H. WESTERN PLUMPTRE,  
“Eastwood Rectory.”  
(And 199 others.)

Public notice of the inquiry was given in the usual form on the 6th day of October last, and the inquiry was opened at the Sun Inn, Eastwood, on the 27th day of the same month, at ten o'clock in the forenoon, pursuant to such notices.

*Luke Birkin* proved that he had duly affixed copies of the public notice of the inquiry according to the Act, within the parish of Eastwood. *Thomas Flint*, of Brinsley, proved that he had affixed them in the hamlets of Newthorpe, Moorgreen, and Brinsley. Copies of the “Nottinghamshire Guardian,” and the “Derby Mercury,” being the newspapers circulating within the district, were also put in, containing the advertisement of the inquiry.

There was a considerable number of persons present at the opening of the inquiry, to whom I explained the provisions of the Public Health Act, and the manner in which it would affect the district.

Much interest appeared to be taken in the proceedings among those persons present. Some of these, including the following gentlemen, accompanied me during my personal inspection of the district, which occupied the remainder of that and the whole of the following day:—

Frederick Francis Fox, Esq., agent to the Right Honourable Lord Viscount Melbourne; John Shaw, Esq., surveyor; Mr. Robert Aldred, assistant overseer, Eastwood; Mr. Robert Barber, architect, Eastwood; Mr. William Godber, inn-keeper, Eastwood; Mr. William Chambers, cordwainer, Eastwood; Mr. Charles Toplis, surveyor of highways, Eastwood; Mr. Thomas Chambers, farmer, Moorgreen; Mr. George Morris, bricklayer, Nether Green; Henry Sleight, Esq., chairman of the Basford Union, Newthorpe; Mr. Joseph Page, farmer, Brinsley; Mr. William Booth, surveyor of highways, Brinsley; Mr. Timothy Stapleton,



shopkeeper, Brinsley ; Mr. Joseph Grammer, farmer, Beauvale farm ; and Mr. Thomas Flint, farmer, Brinsley.

The following are the minutes of my inspection, in company with the above gentlemen and other inhabitants :—

MINUTES OF INSPECTION ; 27th October 1852.

EASTWOOD.—*Nottingham Road*.—Mr. *Handford's* property : the tenant of the house, Henry Goodall, complains of the unpleasant effluvium from a grate at the corner of his house. The drain receives the refuse from a slaughter-house close by. He says it is enough to poison any one in summer. They have to go to Bullock's pump, more than a quarter of a mile, for water. There is no water to these houses.

Examined Miss *Shepherd's* supply of water. She says it is good, plentiful, and never fails. It is a draw-well, about 50 feet deep. She says, "I would not have it without drawing."

Mr. *Bullock* has a steam-engine, and is a boiler-maker. He says he has no water, even for his engine, but what he catches from the roof of the building. There are many houses beyond this point without any water. He says he cannot work his engine a quarter of the time he would wish.

Mr. *Robert Godber* has two new empty houses to let, at 25*l.* each rent. There is not a drop of water to them. They have been erected nearly two years.

A row of property consisting of five houses, occupied by Fox, Shaw, and others. No water at all. Mr. James Chambers, rated at about 5*l.*, a large house, has only a soft-water cistern. The house is worth 14*l.* or 15*l.* per annum.

Beyond the windmill, *William Roe's* four houses, one now building. No water. Mr. Elisha Hopkin, sign of the "Fox." Mrs. Hopkin says they fetch their water from Nether Green brook, half a mile distant.

Mr. *Robert Harrison* owns two rows containing 30 houses, called Wellington-place. Have a well, but it is always short when water is most wanted. A slaughter-house belonging to the same, but occupied by Elisha Hopkin, drains out upon the surface of the road. The occupants of the houses have little earthen pans at their doors to catch rain-water.

*Walker's-row*.—No water but what they can catch. Cottagers here throw out their ashes on the opposite side of the road ; the same of the liquid refuse.

Examined *Nether Green, brook* and houses. The brook has occasionally pit-water in it. Seven houses and one workshop, belonging to Widow Chambers, have no water

but the brook to use for food and other purposes. If they were to sink a well they would either get no water or only what was very bad.

Mr. *Booth* resides on the Derby and Mansfield road. He is agent to Barber, Walker, and Co. His house is worth 30*l.* per annum with the office. He says they fetch water for food half a mile. This is called Nether Green, Eastwood. About 25 houses. The privies behind of a very improper character. None of the houses have any water within half a mile, except the brook, into which some privies drain. Ashes and other refuse thrown out upon the surface, and near the brook. This place is complained of by George Morris. A privy is about 15 feet from the road; between it and the road there is a heap of ashes and refuse from the houses. He says, "I have complained to the owner, Abraham Riley, and he told me I might leave if I did not like it, and he should send me notice to quit. All the liquid refuse is poured on the turnpike road, and the owner will not do what is necessary to remove the nuisances."

*Derby Road.*—Mr. *Robert Godber*, three houses. Fetch water for food from the canal. One of the tenants says, "We have no place particular to fetch water from. The canal is nearly half a mile distant."

*Walker's Executors*: five houses below, on the opposite side, have a draw-well, but the tenants say it fails in summer. The privy has no ashpit or receptacle for excrement; it is close to the road, very offensive, and much complained of.

Mr. *Ellinor's* property: seven houses; a draw-well of very offensive water, filthy and milky.

Examined the churchyard; seems full, but saw no bones on the surface.

*Ilkeston Road, or Church Street.*—On Mr. *Barber's* property, a slaughter-house adjoining his own house; it is very clean.

Mr. *Brown*, surgeon, has a 30-yards deep draw-well, which cost a large sum of money.

Mr. *George Askew's* property: pump-well of surface spring water is dry in summer.

Mr. *Robert Godber's* cottages: a pigsty complained of by two of his tenants in the yard, below where the sty is.

About a quarter of a mile lower down, a ditch along the roadside, at curve of the road, is dangerous and a nuisance; it has been so 20 or 30 years. Mr. Barber was surveyor of highways some years since, and then covered part of it over, but the remainder is a great nuisance.

There is a public footpath to Ilkeston and the railway ; and some filthy drainage from cesspools belonging to Mrs. *Manson* is stated to be intolerable in summer to the passers by.

On Mr. *Barber's* premises I saw some very dense earthenware pipes made by Mr. Joseph Bourne, of Denby potteries, near Denby ; the best material I have seen, and within a short distance only.

NEWTHORPE.—*Hill Top*.—Mr. *John Elliott*, sign of the "Three Tuns," has a draw-well 28 yards deep ; the occupants of 42 houses come here for water, and contribute about 1s. 6d. each annually for well-ropes ; it failed during the last summer. He says, "I put a restraint upon them in summer, and stint them to eating water ; I have generally stinted them in summer. The greatest distance is about 300 yards."

Most of these houses have been built on the waste, and there are some very dilapidated cottages belonging to Lord Melbourne.

*Beauvalee*.—The wife of Mr. *Paxton*, grocer, says,—

"We have no water in summer, spring, or winter, but buy from a man who brings it from Beauvalee, and it has cost us as much as 1s. per week at times. We cannot keep ourselves as clean as we would wish. We generally keep two cows, but now have only one. We catch all the rain-water we can, but are sometimes without any."

There are about 40 houses here, and about 30 are Lord Melbourne's ; all are in the same condition, or nearly so.

There is a hole behind Mr. *William Lindley's* house, with very filthy water in it ; some of the people drink it in summer ; it is in a most abominable condition now, and must be much worse in summer ; it is supplied from the clouds, and occasionally the water from the road is turned in.

*Lower Beauvalee*.—All the houses get water from the brook and dam ; it is not very good, but there is plenty of it. Several houses have very dirty water, not fit for food. An old man, 82 years of age, has lived here all his life, and has drank this water ; some of it is coal-pit water. All the houses here are Lord Melbourne's property.

28th October.

*Newthorpe Village*.—*Mary Ogden* says,—

"We have to go to the brook below the tan-yard for water, and it is not good, because the tan-yard drainage goes into it. In

summer we are very short. It then costs me 3*d.* per week, and we are very careful of it. We catch a little rain-water. The brook is a quarter of a mile distant. All the neighbours do the same. A few have wells, but as soon as it becomes dry weather the water is gone. Many of the houses are thatched, and cannot catch rain-water. In winter season we can get a little at the wells."

Mr. *Henry Sleight*, gentleman, has a good house, but very little water. Mr. Sleight is chairman of the Basford union.

KIMBERLEY.—A large village, and ecclesiastical district, in which a new church has been built recently. It is beyond the scope of my official inquiry, but I was induced to examine it at the request of Mr. Fox and others. An intention was expressed of petitioning for the application of the Act to Kimberley, and I think it needs improvement quite as much as the other villages, if not more. Mr. Thos. Birkin and Mr. Thos. Shaw, churchwardens, and the Rev. Wm. S. George Sargent, incumbent, accompanied during the inspection.

Public roads bad. The village has a very neglected appearance.

They have wells generally, but all the refuse is poured but on the surface, and runs over the roads. The churchwardens say that at Swing-gate, at the south-east end of the village, there are accumulations of ashes, stagnant drainage, and other nuisances. They have no where to throw the drainage off.

In front of Mr. *Birkin's* is a public well, quite uncovered, and the leaves falling in; it is about six yards deep.

Mr. *Sargent* says there are other wells uncovered.

Some of the people in the higher parts are badly off for water, above the quarries; they catch what they can, and go to a spring above 100 yards off. Foul, wretched privies, without soil-pits or fences.

Kimberley is a populous place, and needs the Public Health Act. The privies are very bad, and the nuisances numerous; the arrangement of privies appears to have been the last consideration; they are of a very primitive kind. The village is admirably situated for drainage. The people are framework knitters and colliers.

Mr. *James Morley's* and Mrs. *Sarah Crick's* property: a very shocking nuisance in the latter,—a large pool which has been pig manure; the man said he would fill it up.

In front of Mr. *Samuel Browne's* property there are very offensive pigsties; and a privy on Mr. *Josh. Reeves's* pro-

perty, of which Mrs. Reeves says, in reply to complaints, "The houses of Mr. Brown were brought to it."

Mrs. Reeves complains of her neighbours, and they all accuse one another of poisoning each other with stench, but they defend their own nuisances.

A pump is provided for 12 houses belonging to *James Morley*, but he keeps it locked.

*Alley Spring* is an open well, with a large quantity of stones, leaves, sticks, and old shoes, &c. in it. There is a good supply of water, however, and a pipe conveys part of it to a brewery, and to Morley's pump. It also supplies a great number of people who fetch it from the spring.

There are two breweries in Kimberley.

Complaints of nuisances are very numerous.

MOORGREEN.—Examined the springs at *Moorgreen*.

Mr. *John Preston*, butcher: no water on premises. Fetch water about 300 yards distance for food. Catch rain-water, but there is not sufficient because many of the houses are thatched. Other people are compelled to fetch water the same distance. None have water fit to drink. All Moorgreen is Lord Melbourne's property.

OLD BRINSLEY.—Corner of *Stony-lane*: a foul privy draining on the road is a most abominable nuisance. All the land here belongs to the Duke of Newcastle. The people in Old Brinsley are tolerably well off for water, so far as the wells are concerned.

Coal used by the poor costs 4s. 6d. per ton delivered.

*James Newton*, butcher, has a slaughter-house, and has been killing to-day. The blood is now running down the side-channel, and then by a bye-set channel across the road.

*Engine-row*.—A draw-well supplies one half of the inhabitants; it is about 20 yards deep, and never fails.

Many persons here have full necks. The poor woman who gave information as to this well has a large sac.

*Brinsley Moor*.—*Charlotte* and *Phœbe Raynor's* cottage: no roof, nor seat, nor door to the privy, and yet it is close to the public road.

*Sarah Wagstaff* complains of it, and also of a foul ditch-channel on the other side, close to the door. The privy adjoins to her house.

Three cottages belonging to the *Duke of Newcastle* have a privy without a door. These people are squatters on the boundary of the common, now enclosed.

Very good red roads are formed here from burnt shale or bind.

I never saw in any country place better roads than the public roads in these hamlets of the parish of Greasley.

*New Brinsley*.—The inhabitants all very badly off for water.

*Timothy Stapleton* says there are 100 houses, and that only one is thatched, but some of the others have no spouts, and therefore cannot catch rain-water.

There is a hole, or “resarve” as the people call it, but it is often dry in summer, and the ducks and geese have access to it. The water is used by some persons for food, but not by all. It is quite muddy and unfit for food; and yet, when there is any in summer, it is fetched by some few for food to as great a distance as  $1\frac{1}{4}$  miles. The greater part, however, obtain water at rather less than a mile distance.

*Hannah Smeeton*, sign of the “Durham Ox,” has to have water drawn by barrels; and says, that in scarce water time it has cost her as much as 1s. per day.

There is a row of very good cottages here, in front of which another owner has erected some one-story cottages, within about 10 feet of them, all along the front. These are let for lodging-houses, &c., and are complained of as a great nuisance to the whole neighbourhood. Heaps of ashes and manure are laid on the opposite side of the road.

There are two farm-houses and a few cottages lower down; they have no water. One is a farm of 96 acres, and the other 84 acres. The farmers have to drive cattle to water, and for the houses fetch it in large barrels.

Examined the brook at the lower end, from whence they obtain the greater part of their water. It is now quite muddy, but in summer is said to be dry. Close by the brook is a large manure-heap, from which the strong liquid is running, and will flow down to the dipping-hole.

POPULATION, HOUSES, &c.—The parishes of Eastwood and Greasley are situated about 11 miles north-eastward from Derby, and about  $8\frac{1}{2}$  miles westward from Nottingham. Eastwood and Brinsley are bounded on the west by the Erewash river, which is the boundary also of the counties of Nottingham and Derby. The same river separates

Eastwood from the township of Heanor, upon which I have recently reported to your Honourable Board.

The geological character of the district is that of the coal-measures, and there are several collieries in full operation. The surface is more uneven than would be usually understood by the term undulating; in some parts the inclination is considerable. There is no impediment to the discharge of the surface waters, with the exception of the weirs and other obstructions upon the Erewash, and there are few houses in its vicinity. With the exception of New Brinsley, all the villages included in the inquiry are at a considerable altitude above the river.

The avocations of the inhabitants are very similar to those of the inhabitants of Heanor. A great proportion is engaged in agriculture, and the remainder in the collieries, and as framework knitters. The whole of the parish of Eastwood is included in the present inquiry, but not the whole of the parish of Greasley, which consists of a number of hamlets having distinct boundaries.

Until the census of 1831, I have been unable to obtain the number of houses in these places, and until 1841, the numbers of inhabitants in the hamlets were not separately taken. It will be seen that I have included the hamlet of Kimberley in the figures, because it was specially brought under my notice, though not included in my official inquiry.

The number of inhabitants in Eastwood was, in 1801, 735; in 1811 it had increased to 1,120; in 1821 to 1,206; in 1831 to 1,395; in 1841 to 1,621; and in 1851 to 1,720. The number of houses in the same parish was, in 1831, 312; in 1841, 324; and in 1851, 339.

The population of the whole parish of Greasley was, in 1801, 2,968; in 1811, 3,673; in 1821, 4,241; in 1831, 4,583; in 1841, 4,793; and in 1851, 5,287.

The hamlets under consideration contained at the census of 1841, as follows:—Newthorpe, 1,126; Moorgreen, 391; Brinsley, 1,139; and Kimberley, 1,778 persons. In 1851, the numbers were, Newthorpe, 1,358; Moorgreen, 411; Brinsley, 1,136; and Kimberley, 1,934 persons.

The houses in the same hamlets were, in 1841, as follows:—Newthorpe, 227; Moorgreen, 72; Brinsley, 236; and Kimberley, 341. In 1851, the numbers were, Newthorpe, 220; Moorgreen, 68; Brinsley, 216; and Kimberley, 323.

The following is a classification of the rateable value of the houses in the several places, as returned by the overseers of the poor:—

## CLASSIFICATION OF HOUSES.

Annual Rateable Value.	Number of Houses in				
	Eastwood.	Brinsley.	Moor- green.	New- thorpe.	Kim- berley.
At £1 and under -	157	70	18	95	201
2 " £3	80	91	20	87	95
3 " 4	26	17	9	15	4
4 " 5	15	6	5	3	18
5 " 6	11	5	7	14	9
6 " 7	6	3	1	3	3
7 " 8	6	-	-	2	6
8 " 9	5	-	-	-	-
9 " 10	4	10	-	23	-
10 " 15	17	18	4	1	19
15 " 20	6	2	4	1	1
20 " 25	2	-	-	-	-
25 " 30	1	-	-	-	-
30 " 40	1	-	-	1	1
40 " 50	1	-	-	-	-
50 and upwards	1	-	-	-	-
Totals - -	339	222	68	245	357

The aggregate annual rateable value of houses in the parish of Eastwood is 1,326*l.*; land, 1,563*l.*; and of all the rateable property in the parish, 3,079*l.*

The rateable value of the hamlets under inquiry is as follows:—Brinsley, 2,044*l.* 13*s.*; Newthorpe, 2,845*l.* 18*s.*; Moorgreen, 2,072*l.* 11*s.*; and of Kimberley, 1,978*l.* 3*s.*

STATE OF DISEASE AND MORTALITY.—The following return has been made to me by R. B. Spencer, Esq., Superintendent Registrar of the Basford union. Upon so narrow a basis as this, where none of the places separately exceeds 2,000 inhabitants, it is to be expected that the number of deaths will considerably fluctuate. It would require a greater number of years than is included in the return, to justify any very specific conclusions. It is quite certain, however, that when a great portion of the country, including 61 whole registration districts, containing more than a million inhabitants is found only to have an average mortality of 16 to 1,000 per annum to the living population, the sanitary condition of Eastwood, Moorgreen, Newthorpe, Brinsley, and Kimberley, must be exceedingly defective with an average mortality for the last three years of 20·95, or nearly 21 to 1,000 of all living.

Omitting the hamlet of Kimberley, which does not officially come within this inquiry, I find that the average mortality for the same three years in Eastwood, Moorgreen,



Newthorpe, and Brinsley, is 21·40, being very little short of the standard which, according to the provisions of the Public Health Act, is so greatly in excess as to authorize a preliminary inquiry, with a view to remedial measures, without any petition whatever.

Place.	Popu- lation in 1851.	Number of Deaths in			Rate of Mortality to every 1,000 living.			
		1850.	1851.	1852.	1850.	1851.	1852.	Averages.
Eastwood -	1,720	40	33	38	23·25	19·18	22·09	21·51
Moorgreen	411	7	6	3	17·03	14·59	7·30	12·98
Newthorpe	1,358	26	25	29	19·14	18·41	21·35	19·63
Brinsley -	1,136	32	36	22	28·17	31·69	19·36	26·41
Kimberley	1,934	27	47	41	13·96	24·30	21·20	19·82
Averages and Totals }	6,559	132	147	133	20·12	22·41	20·28	20·95

As compared with the districts already named, the mortality in these parishes is more than 20 per cent. in excess. In absolute numbers, the result of comparison is, that in Eastwood, Moorgreen, Newthorpe, Brinsley, and Kimberley, 32 human lives in excess are sacrificed annually from preventible diseases. Surely this is a case requiring an immediate remedy.

I received the following note from Wm. Scott Smith, Esq., surgeon :—

“ SIR,

“ *Eastwood, 29th Oct. 1852.*

“ You expressed a wish that I would give you my opinion as to the state of this district.

“ I do not doubt that the cause of fever being so very prevalent in New Brinsley and Kimberley is from want of water in the former place, and want of cleanliness in the latter; and that if the sanitary efforts be carried out, the neighbourhood will derive great benefit therefrom.

“ I am, Sir,

“ Your obedient servant,

“ WM. SCOTT SMITH, Surgeon.”

“ To Wm. Lee, Esq.”

DRAINAGE, SEWERAGE, &c.—There is no systematic drainage or sewerage of any of the villages. The privies have soil-pits, and the liquid refuse from the houses and other buildings, is chiefly left to take its own course along the

surface, until it is either absorbed or evaporated, or has found some brook or pond, which, of course, it contaminates.

WATER SUPPLY.—The great deprivation which many of the inhabitants have to suffer for want of water, the bad quality of much that is used, even for food, and the distances to which water is carried, are stated in detail in the minutes of my inspection. I have met with few places in a worse condition for water than these villages.

The Rev. *H. Western Plumpton*, rector of Eastwood, said it was impossible for the people of Eastwood to be clean. The water was very bad in quality, and deficient in quantity. A better supply would be a great mercy to the poor.

*Henry Sleight*, Esq., chairman of the Basford union, resides at Newthorpe, and said that he had no immediate occasion for water, but wished to obtain it for his neighbours who were destitute of it.

Mr. *Robert Barber* said,—

“I reside in Eastwood, and am an architect and surveyor. I have long been aware that the district to which this inquiry extends is in a most destitute condition, so far as the water supply is concerned. The springs have been generally taken by the coal-mining operations, and the inhabitants of part of Eastwood and the hamlets have been driven to drink water unfit for food. In summer time especially they have had to fetch water from great distances, often nearly half a mile.

“In December 1851, I was employed on behalf of his Grace the Duke of Newcastle to ascertain if it were possible, at a moderate expense, to supply the inhabitants of New Brinsley with water. I went over the Duke's estate for that purpose, but could not find any springs upon it to be depended upon. The only supply that would be available I found upon Underwood Common, where there are several fine springs of pure water, which I thought might yield a sufficient supply. The springs were unusually low at the time, and when I measured them produced nearly 4,000 gallons per diem. This would allow 40 gallons per diem to each of 100 houses, and as there are but about 70 houses in New Brinsley, a tolerable surplus would be left. I took a trial level, and found a fall of 54 feet in a distance of about 2,000 yards to the upper part of the district.

“The inhabitants of New Brinsley appear very anxious to obtain a supply, and expressed their willingness to bear their proportion of the expense.

“With reference also to the supply of Eastwood and the other parts of the district, I have taken an account of certain springs (above the level of the houses) at Beauvalee and High Park. I give you the quantities flowing on the 21st December 1851, which was a very dry time :—

*West side of Beauvalee—*

	Galls. per min.
Robin Hood's well - - - - -	1·800
Pudding-bag field - - - - -	·079
Estimate, supply from drainage - - -	1·721

*East side of Beauvalee—*

Pack-saddle close - - - - -	2·250
Crow-park - - - - -	1·200
Estimated supply from other springs on the route -	1·200
Total - - -	8·250

“This is equal to 495 gallons per hour, or 11,880 gallons in the 24 hours.

“As to the quantity that would be required: there would be 2 breweries and 160 houses in Eastwood; Nether Green not included:—

	Houses.	Galls.	Total per day.
Eastwood - - - - -	160	50	8,000
Moorgreen - - - - -	20	40	800
Newthorpe, Hill Top - - - - -	14	40	560
Newthorpe hamlet - - - - -	37	40	1,480
Beauvalee, in Newthorpe - - - - -	38	40	1,520
Total - - - - -	269	-	12,360

“In Newthorpe hamlet there have been many new houses since the account was taken. Mr. Godber, of the Sun Inn, Eastwood, uses 1,860 gallons of water per week for brewing. The other brewery in Eastwood uses about as much.”

Mr. Godber stated at the inquiry, that the water he requires costs him about 50*l.* per annum.

From the above evidence it will be seen that his Grace the Duke of Newcastle, as the owner of part of the district included in the inquiry, is aware of the destitution existing with respect to water, and has already caused an examination to be made with a view to a better supply.

It will be seen also by the following extracts from a report presented at the inquiry, by direction of Mr. Fox, the agent to Lord Melbourne, that a desire to improve the supply exists with regard to the other parts of the district.

The same springs are named in the evidence of Mr. Barber and the report of Mr. Shaw; but there is a considerable difference in the quantities of water as stated by these two gentlemen. I can only account for this by the fact, that 9 or 10 months had elapsed between the two sets of observations. The date of Mr. Shaw's examination is 23d October 1852.

Extract from a "Report of the Water Supply and other matters connected with the estate of the Right Hon. Lord Viscount Melbourne," by John Shaw, surveyor, Derby.

"I have carefully ascertained the levels of the several springs that may be made available for the supply of good water, and also (in conjunction with Mr. Heptonstall) ascertained the probable supply from each.

"The latter varies very considerably from the particulars furnished to me, but as great care has been taken in testing the springs, I have adopted my own estimate in the calculations I have made.

"I have run the levels from a datum point on a stone at Upper Beauvalee, opposite the chapel, at the corner of the road leading to Lower Beauvalee, from which there is no doubt that plenty of fall could be obtained in every direction.

"This point I find is 8'40 feet below the top of the road, opposite the Ram inn, at Upper Beauvalee, which I believe is the highest point at the surface to which it would be necessary to convey the water, except just at the hill in the road opposite Mr. Coxon's garden, at Moorgreen, which would not be of consequence.

"The following will show the comparative levels of the different springs, with the height at which water may be obtained above the highest point at Upper Beauvalee; viz.—

	Above datum. Feet.	Above highest point at Beauvalee. Feet.
Robin Hood's well	61'42	53'02
Pudding-bag spring	56'99	48'59
Thicket spring	58'12	49'72
<i>South-east side Beauvalee Farm.</i>		
Crow-park	39'48	31'08
Pack-saddle	32'13	23'73
Cow-pasture	28'67	20'27

"Thus it will appear that the water at the lowest spring is 28'67 above the point I have taken as a datum, and 20'27 feet above the highest point at which the supply of water will be wanted.

"Although it would be very desirable to collect water at a higher level than these latter springs can be carried, still it will appear that, allowing for reservoir and filterers, (below the feeding point,) the water may be carried sufficiently high to serve the most elevated portion of the district, at some feet above the surface, and I have no doubt that the springs on the south-east side of Beauvalee, (considering their velocity and the dip of the strata,) might be tapped at a somewhat higher level than they appear. The superior elevation of Robin Hood's well, and the springs on that side of Beauvalee would of course allow for raising the service point of the reservoir very considerably.

"I find the total supply of water that may be derived from the springs in question, at the present time, to be as follows:—

	Gallons per hour.	Gallons per day.
Robin Hood's well	390	9,360
Pudding-bag spring	45	1,080
Thicket spring	45	1,080
Crow-park spring	100	2,400
Pack-saddle	200	4,800
Cow-pasturo	200	4,800

“ But, as in the first place there is a large tract of land on Messrs. Grammar and Chambers' farms watered by the brook fed from Robin Hood's well,—and in the second, the other springs (Mr. Grammar states) vary considerably,—and thirdly, a proper supply must be provided for the farms,—I have calculated the supply of water available for the purposes of the proposed water-works as under :—

	Gallons per day.
<i>Robin Hood's well</i> , allowing one fourth for supply of brook course	7,020
<i>Pudding-bag spring</i> , allowing two thirds off for frequent short supply and quantity required for cattle	360
<i>Thicket spring</i> , more frequently dry, one fifth	216
<i>Crow-park</i> , stated to be more than an average at the present time take; therefore, one half only, allowing remainder for scarcity and supply of cattle	1,200
<i>Pack-saddle spring</i> , one half	2,400
<i>Cow-pasture spring</i> , one half	2,400
Total	<u>13,596</u>

“ Another method :—

Robin Hood's well, three fourths	7,020
Pudding-bag spring, one half	540
Thicket spring, one fourth	270
Crow-park, two thirds	1,600
Pack-saddle, two thirds	3,200
Cow-pasture, two thirds	3,200
Total	<u>15,830</u>
Mean supply (say about)	15,000

The rain-water on table land of Beauvallee farm would partly be used by cattle and for farming and domestic purposes, and partly drain away below the proposed aqueduct. The rain-fall taken at 26 inches, allowing 16 inches for evaporation, &c., gives 600 gallons per acre per day, or 18,000 gallons for 30 acres. Estimate of water available for the proposed supply derivable from rain and other sources, in addition to the springs before enumerated (say half the above)

Average daily supply 24,000

“ The following houses require to be supplied with water ; viz.—

<i>Moorgreen</i>	-	-	-	-	41
<i>Newthorpe</i> , including Upper Beauvalee, Newthorpe Hill Top, and Newthorpe Common					202
<i>Eastwood</i> (333 houses), Mr. Barber says 160 will want water at the present time	-				160

Total number of houses requiring present supply 403

Present supply required for Newthorpe and Moorgreen,					
243 houses at 50 gallons each per day	-				12,150
Eastwood, 160 houses at 60 gallons each per day	-				9,600
				Total	21,750

“ According to this estimate there would be found sufficient water for the present wants of Moorgreen, Newthorpe, and Eastwood, but, *as there is every prospect of a considerable increase in the number of houses in these hamlets, it is a question of considerable doubt as to whether a sufficient supply could be obtained, from the sources named, for the future wants of the district.*

“ The plan of the works, if carried out, could not, I think, be better than to collect the water, at as high a level as possible, above Moorgreen, in the fallow-field occupied by Mr. Coxon, and after proper filtration to distribute it by pipes in the localities where it is wanted.

“ The estimated cost of such works would be about 1,850*l.*, and if this estimate is correct, allowing interest at 5 per cent., with annual expense of management, water might be supplied to the district in question at a little more than 7*s.* per house per annum.”

The observations above, which Mr. Shaw has placed in *italics* in his report, will require careful consideration by the local authorities, because an expenditure now of nearly 2,000*l.* upon works which might in a few years become inadequate, would be unjustifiable. This is not stated in the way of objection, but to induce caution in any Local Board of Health that may be elected. A proper supply of water is highly necessary, and is much required for the inhabitants of these places. I would urge that, before proceeding, the full available supply from these sources should be accurately ascertained, and compared with the present requirements and probable future demand of the inhabitants, so that there may be no uncertainty in the matter. This is the more necessary, because a considerable proportion of the expenditure would be for pipeage to collect the water.

If the springs described should be found on such examination to be inadequate, there would be no difficulty, that I am aware of, in obtaining a supply from the river Erewash, where the yield would be practically inexhaustible. If that source were adopted, a steam-engine, or other mechanical

force, would become necessary to raise the water; but the expense would be no serious obstacle when it is considered that the pipeage would be shortened, and that fuel is cheap. In Scotland I have seen steam-engines at work economically upon farms of only 40 and 50 acres of land. It is surely a much more important matter to supply an aggregate population of 5,000 or 6,000 persons with one of the necessities of life. I might suggest further that, if the river had to be used as the source for water, an arrangement might probably be made between the Local Board for this district and the Local Board for Heanor, which is only separated from Eastwood by the river Erewash; that the same steam-engine and filter-beds should be used for both districts, each laying down its own pipes and distributory apparatus. By this means the working expenses would be distributed over a population probably exceeding 10,000, which is more than double the number of some places now using steam-power for the same purpose.

I must also remark that the money for the construction of the works would be obtained with facility at four per cent., if not less, and therefore the charge for water would be less than that stated by Mr. Shaw.

**NUISANCES.—STATE OF DWELLING-HOUSES AND APPURTENANCES.**—Much that would have properly come under this head will be found in the minutes of my inspection, and therefore I will only add the following testimony from Mr. *Robert Barber*, who says,—

“I have observed injurious nuisances existing, and besides these, great evils exist with reference to the position, ventilation, construction, and drainage of houses, and the condition of the privies, &c. They ought to be placed under proper regulations.

“For these reasons, and others which I have named in connexion with the water supply, I have felt it right to take a great interest in this inquiry, with a view to the application of the Public Health Act.”

**PAVEMENTS, AND CONDITION OF ROADS.**—The public highways, especially in Greasley, are kept in very good repair. I did not observe much pavement of private premises.

Mr. *William Booth*, surveyor for Greasley, gave me an account, from which it appears that the total length of highways and turnpikes in that parish, and liable to be repaired by the inhabitants, is upwards of 23 miles. The annual income and expenditure is a little less than 400*l*. I regret that I have been unable to obtain a similar return from the parish of Eastwood,

STATE OF BURIAL GROUNDS.—The places of worship in the district are numerous, including, with Kimberley, four churches and 11 chapels. There are burial-grounds attached to the churches; and I find, on inquiry, that a few interments have taken place at the Baptist chapel at Newthorpe. There have been none at any other of the chapels, either in Kimberley, Newthorpe, Moorgreen, Eastwood, or Brinsley. I examined the whole of the churchyards, and do not think any interference necessary at the present time.

LOCAL JURISDICTION.—There is no Local Act of Parliament in force within any part of the district for paving, lighting, cleansing, watching, regulating, supplying with water, or improving the same, or having relation to the purposes of the Public Health Act. The only local authorities are the churchwardens, overseers of the poor, and surveyors of highways.

There are no public arrangements for watching or lighting any part of the district.

Mr. Barber has a small gaswork upon his premises at Eastwood, consisting of three retorts, but only two of these were working at the time of my visit. The holder contains about 1,200 feet, and he supplies some of the houses with gas.

This work is said to be a great convenience to Eastwood; and under improved public arrangements Mr. Barber would be quite disposed to enlarge the work at the instance of the Local Board of Health, with a view to a more public and general supply.

BOUNDARIES.—In Mr. Shaw's report to Lord Melbourne, the then proprietor, he was of opinion that parts of the district, purely agricultural, and in distinct drainage areas, should be excluded from the district to be constituted for the purposes of the Public Health Act. With the concurrence of Mr. Fox, the agent for the estates, the following extract from such report was laid before me:—

“The boundaries I should recommend to be altered, would be to leave out the whole of the farms occupied respectively by Messrs. Read, Bowler, Rogers, and Gething; and take the brook course from the Abbey Farm as the boundary, all the way down to Beggarlee engines, and on to Eastwood, unless a deviation was made below Brassington's cottage, and the road taken as the boundary, from the turnpike to its junction with the brook course at Barber and Walker's engines.

“On the other side of the district, towards *parts of Awworth, Ilkeston, and Eastwood*, the line of boundary would not be so clearly defined; but, as it might be desirable to include some of the lands occupied by Messrs. Grammar and Calam, it would perhaps be as well to take the canal as the boundary on that side



*of the hamlet, and exclude only those lands lying between the canal and the Ilkeston boundary.*

“As the lands proposed to be omitted form distinct drainage areas, and are at a considerable distance from those parts to which the application of the Public Health Act appears to be required, there will, I apprehend, be no difficulty in procuring the recommendation of the superintending inspector in his report, to adopt the proposed boundaries.”

I have carefully examined the proposed boundaries. They are easy to define, and I think may safely be adopted for the purposes of the Public Health Act.

### CONCLUSIONS.

It is my duty now to lay before your Honourable Board the conclusions to which I have come upon this inquiry, and to add the recommendations which I think would enable the condition of the district to be improved.

I. That the mortality in the parish of Eastwood, and in the hamlets of Moorgreen, Kimberley, Newthorpe, and Brinsley, within the parish of Greasley, is proved by the registers to be greatly in excess, considering the natural circumstances of the district.

II. That, with the exception of the surveyors of the highway, there is no local authority capable of constructing any public works, and that the powers of the surveyors are inadequate to remedy the sanitary evils existing.

III. That the avocations of the inhabitants are not calculated to be appreciably injurious to health.

IV. That the inhabitants suffer greatly for want of proper supplies of water; and that this deprivation, added to the absence of underground drainage, and the consequent existence of injurious nuisances, is sufficient to account for the excessive mortality.

V. That the burial-grounds do not require to be interfered with.

VI. That according to estimates which have been prepared for Eastwood, Moorgreen, and Newthorpe, the inhabitants might be supplied with tap-water, at a price little exceeding three halfpence per week per house; and that Brinsley could probably be supplied for even a less sum.

VII. That it is desirable, for reasons herein-before stated, that the hamlet of Kimberley should be included within the same district, but that no petition has yet been received from the hamlet of Kimberley.

VIII. That a great part of the establishment expenses and other administrative machinery of the Public Health Act would be unnecessary in the district; but that with an

efficient Local Board, the Act may be put into operation there with great advantage to the inhabitants.

IX. That the boundaries of the said parish of Eastwood, and of the said hamlets of Moorgreen, Newthorpe, Kimberley, and Brinsley, are not those which may be most advantageously adopted for the purposes of the Public Health Act; but that certain parts of the district described hereinbefore in the extract from Mr. Shaw's report, should be excluded.

WHEREUPON I RECOMMEND,—

1. That the Public Health Act, 1848, except the section numbered 50 in the copies of that Act printed by Her Majesty's printers, be applied to the parish of Eastwood, and to the several hamlets of Moorgreen, Newthorpe, Kimberley, and Brinsley, with the exception of the portions of the same above referred to, and that such parish and hamlets form one district for all the purposes of the Act.

2. That the Local Board to be elected under the said Public Health Act consist of twelve persons, three of whom shall be elected for and by the parish of Eastwood, three for and by the hamlet of Brinsley, three for and by the hamlet of Kimberley, and three for and by the hamlets of Newthorpe and Moorgreen.

3. That one third in number of the said Local Board shall go out of office in each of the said places on the 25th day of March in each year subsequently to that in which the first elections shall take place.

4. That every person, at the time of his election as member of the said Local Board, and so long as he shall continue in office by virtue of such election, be seised and possessed of real or personal estate, or both, to the value or amount of not less than one thousand pounds; or shall be rated to the relief of the poor of some parish or hamlet, of which some part is within the said district, upon an annual value of not less than twelve pounds.

I have the honour to be,

My Lords and Gentlemen,

Your very obedient servant,

WILLIAM LEE,  
*Superintending Inspector.*

*The General Board of Health,*

§c.      §c.      §c.

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